# Status of Pheasants in Washington

(A Report to the Washington Fish and Wildlife Commission)

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### Population Status

Surveys (crowing count and brood index) conducted between 1984 and 1998 indicate a decrease in pheasant numbers in eastern Washington during that time (Cliff Rice, in press). There has been a wide variation in pheasant harvest over the past 50 years. Harvest was at its highest during the mid-to-late 1960's with another peak in the late 1970's when over 500,000 pheasants were harvested statewide. Since that time, pheasant harvest has been steadily declining. By using harvest as an index to population status, pheasant populations in Washington are currently much lower than they were in the 1960's and 1970's (Figure 1).

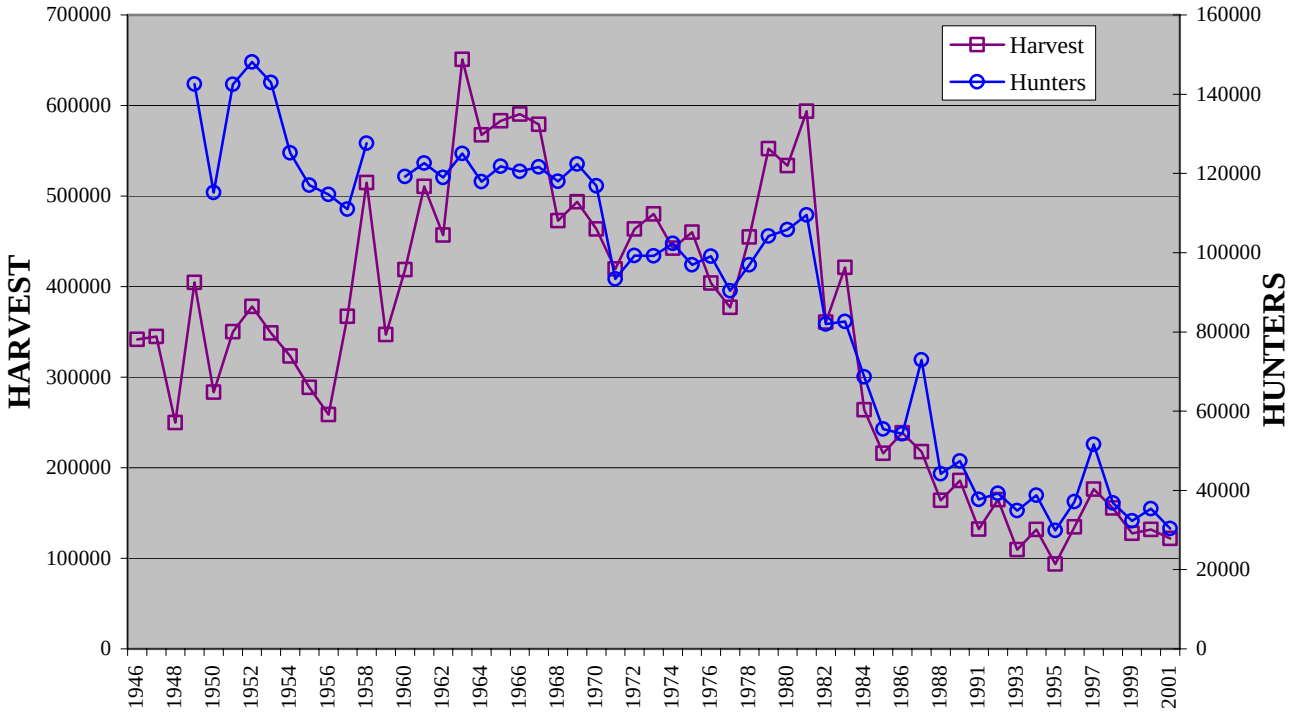


Figure 1. Estimated annual pheasant harvest and hunter participation in Washington 1946-2001.

Over time, harvest estimation techniques have changed due to efforts to increase the precision of the estimates. Harvest estimation techniques did not change between 1984 and 2000, so estimates made during that time should be comparable. Figure 2 indicates a decline in pheasant numbers during that time which is supported by the surveys mentioned earlier.

The cause of the increase in pheasant harvest from 1995 to 1997 may be an artifact of the Eastern Washington Pheasant Enhancement Program. Since rooster pheasants were released in the fall from 1997 to 2001, harvest estimates may be artificially high when compared to harvest estimates between 1992 and 1996 when no pheasants were released in eastern Washington. Considering this fact, the current population status of wild pheasants may be lower than indicated in Figure 2.

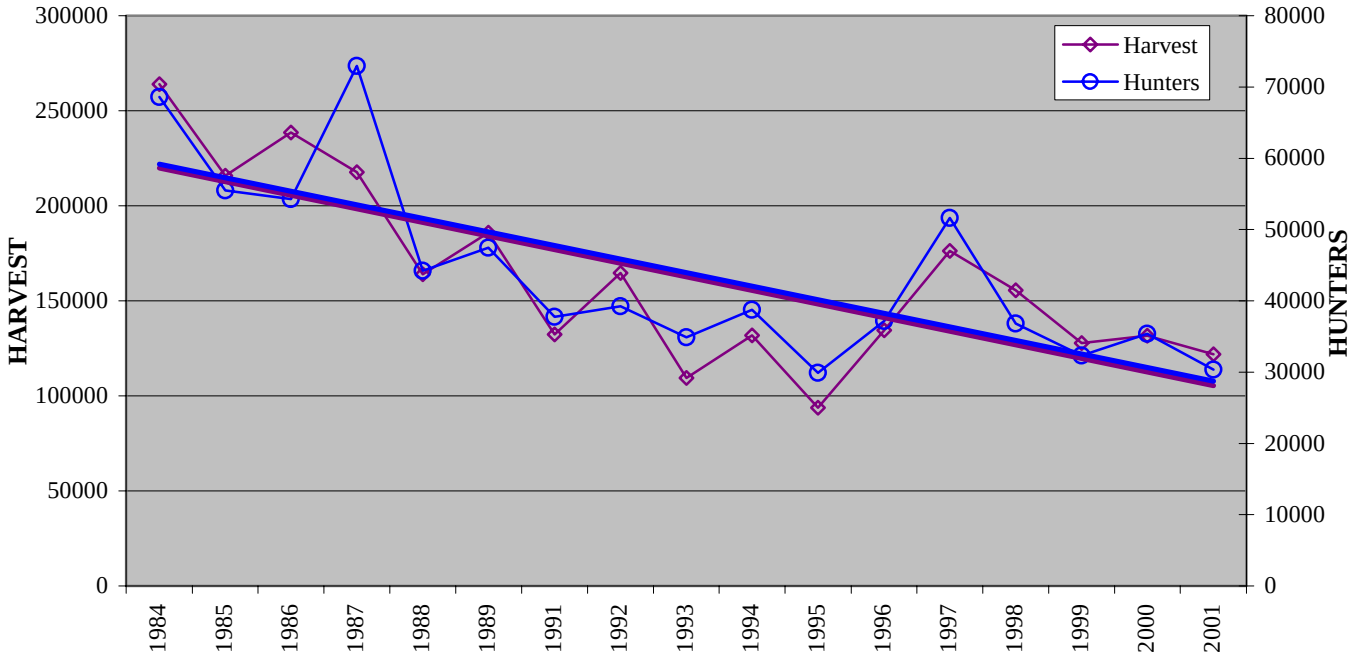


Figure 2. Estimated annual pheasant harvest and hunter participation in Washington 1984-2001.

While indicators show statewide declines (Figures 1 and 2), pheasant populations may not be decreasing in all major river basin in eastern Washington. Harvest estimates for the Snake, Yakima, and Columbia river basins do not reflect the same trends in populations from 1991 to 2001 (Figure 3, Figure 4, and Figure 5). While this data has not been statistically tested at this time, differences in pheasant harvest are apparent. For this report, the "Yakima River Basin" consists of Yakima and Benton counties, the "Snake River Basin" is made up of Asotin, Garfield, Columbia, Walla Walla, and Whitman counties, and the "Columbia River Basin" includes Lincoln, Adams, Grant, Douglas, and Franklin counties.

**Hunters**

Hunter numbers have also dropped dramatically since the late 1960's (Figure 1). A commonly held upland game philosophy is that hunters will participate in relation to the abundance of the targeted species. In the case of pheasant hunting in Washington, peaks in harvest closely mirror hunter participation (Figures 1 and 2).

**Cause of Decline**

The cause of the decline in pheasant populations in Washington is not definitively known, however, it is likely that several factors are working together to influence the result. Pheasant research in many parts of the United States indicates that loss of habitat is the primary reason pheasant populations decline. Of particular importance are breeding habitat (including nesting and brood rearing habitat), habitat for wintering and habitat that provides escape cover from predators. In Washington, many areas that had quality habitat in the 1960's no longer support the vegetative diversity and structure to produce large numbers of pheasants.

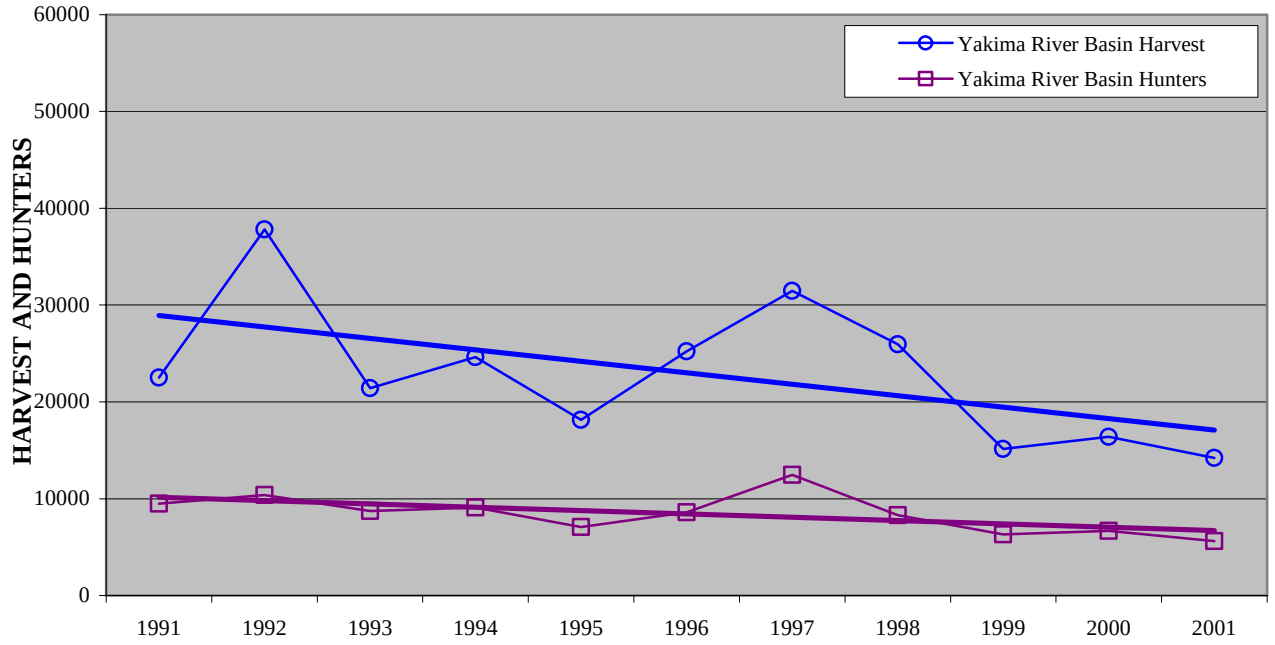


Figure 3. Estimated harvest and hunter participation for the Yakima River basin (Yakima and Benton counties) from 1991-2001.

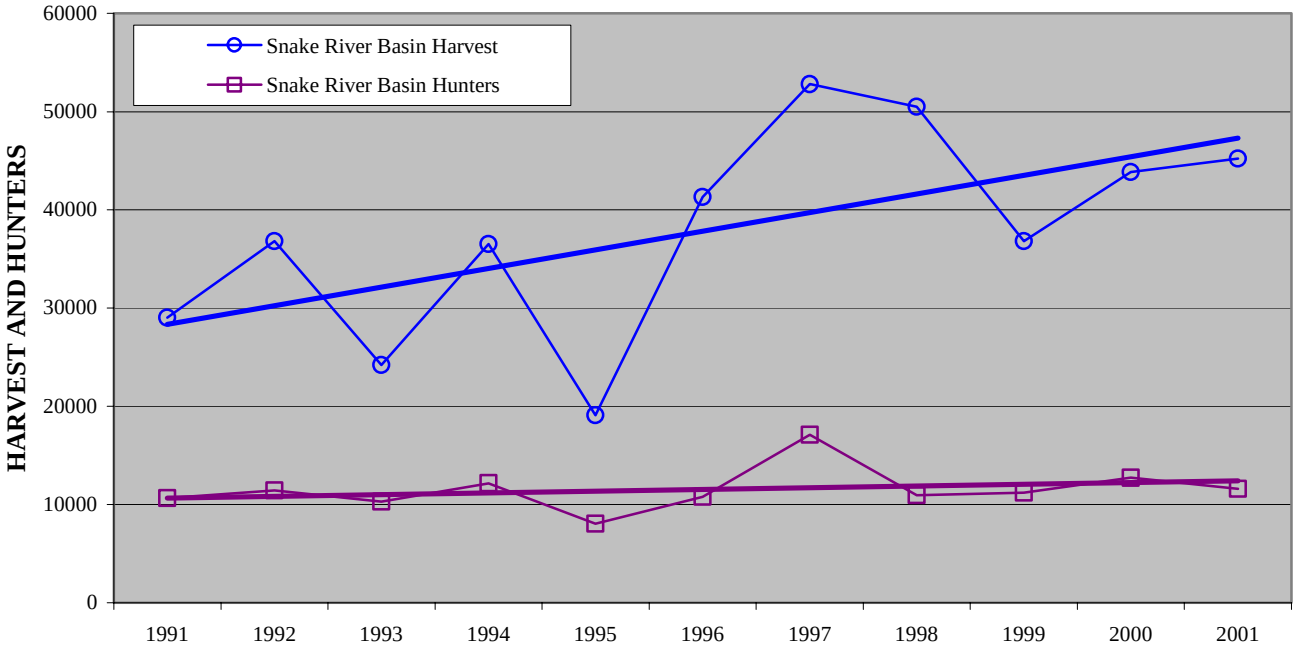


Figure 4. Estimated harvest and hunter participation for the Snake River basin (Asotin, Garfield, Columbia, Walla Walla, and Whitman counties) from 1991-2001.

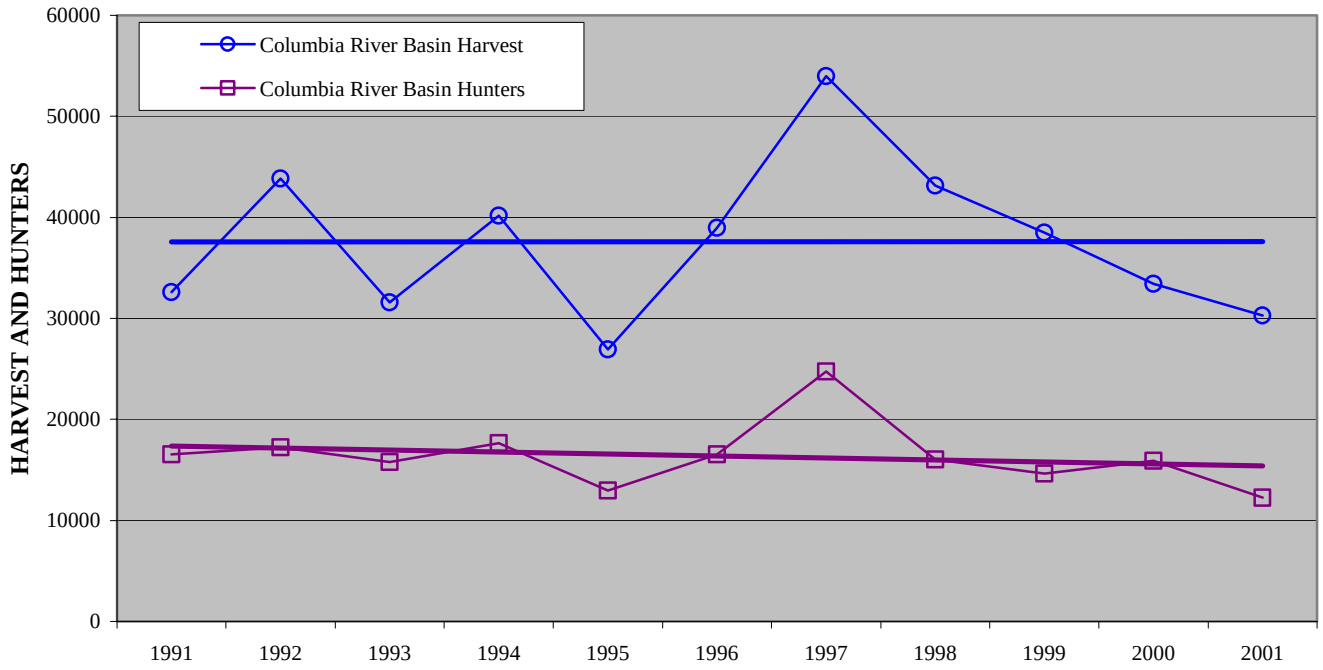


Figure 5. Estimated harvest and hunter participation for the Columbia River basin (Lincoln, Adams, Grant, Douglas, and Franklin counties) from 1991-2001.

According to Washington Department of Fish and Wildlife biologists, alfalfa acreage has increased and has replaced more beneficial agricultural crops. Studies have shown that management practices associated with alfalfa (usually mowing operations) lead to increased mortality for pheasants, especially hens, chicks, and nests. Orchards and vineyards have also replaced potentially beneficial crops in some areas. In addition, wheat stubble (and its associated waste grain) is now tilled under in summer shortly after the wheat is harvested. Farming practices appear to be constantly evolving and most changes have a negative impact on pheasants.

Upland game bird fall population densities, and related harvest, are also dependent on spring weather conditions. Chicks have a difficult time thermoregulating in cold, wet weather, and they need high protein diets (usually from insects) in the spring. Cold, wet springtime weather increases the likelihood of chicks dying of exposure and it often decreases insect availability. In times when pheasant populations are not high, increased mortality due to weather may have an even greater influence on future population densities.

In addition to the factors listed above, pesticide and herbicide use and urban sprawl are also likely contributors to the decline in pheasant populations. The use of pesticides results in the removal of important food resources (e.g. insects). Some pesticides may also have a direct effect on individual pheasants. Herbicides impact plant diversity, which is an important component to quality pheasant habitat. Houses now occupy many of the areas that have pheasants utilized in

the past. In some areas of the Columbia Basin, field corners (associated with circle irrigation) now have private residences placed on them, resulting in a reduction in the amount of pheasant habitat available.

**Management conclusions**

Pheasant populations have declined dramatically in recent years and remain at low levels compared to the past. Causes of the decline are not definitively known, however, habitat loss and or alteration is thought to be the primary cause of the decline. In order to return pheasant numbers to historic levels, several things must happen. First, factors that are responsible for driving population numbers down, and keeping them there, must be identified. Preliminary efforts to do this have recently been conducted by Pheasants Forever representatives (Table 1). Second, that list of factors must be prioritized to reflect those that public agencies, private landowners, and conservation groups can feasibly address. Once that list is made, actions to increase pheasant populations can be taken.

Table 1. A list of factors preventing pheasant populations from reaching historic densities in Washington as prioritized by attendants at the 2002 Washington State Pheasants Forever Meeting.

| Rank | Issue |
|---|---|
| 1 | Clean farming |
| 2 | Lack of brood cover |
| 2 (tie) | Lack of money |
| 4 | Lack of nesting cover |
| 5 | Lack of understanding of pheasant needs |
| 6 | Lack of winter cover |
| 7 | Pesticides |
| 8 | Lack of winter food |
| 9 | Lack of farmer cooperators |
| 10 | Alfalfa harvest |
| 11 | Urban sprawl |
| 11 (tie) | Low interest in pheasant hunting |
| 13 | Lack of spring food for hens |
| 14 | Weed spraying |
| 15 | Circle irrigation |
| 16 | Predators |

One of the most promising concepts on the horizon is the Federal Farm Bill currently being developed. Past Farm Bills have had dramatic positive effects on pheasant populations in Iowa, South Dakota and other pheasant producing states. The newest Farm Bill programs may be the best opportunity for Washington to have a large-scale impact on pheasant populations as well as other upland wildlife species.